

ACTION NOTICE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A 6040.2

Subject: **ACTION: ACTION NOTICE** - National Data
Interchange Network (NADIN) Reporting

Approval Date: MAR 11 1988

From: Acting Manager, Maintenance
Engineering Division, ASM-100

Expiration Date: MAR 11 1989

To: Distribution

Reply to
Attn of:

This notice establishes requirements; and provides guidance and procedures for reporting interruptions in service of the various facilities and services within the National Data Interchange Network (NADIN) system. Upon receipt of this action notice, begin daily National Airspace Performance Reporting System (NAPRS) reporting for NADIN facilities and services. Reporting procedures identified in this action notice have been incorporated in draft Order 6040.15B, National Airspace Performance Reporting System, which will soon be released for coordination. A form of line interruption reporting is also included. Interruption records will not be entered into the national historical data base until Order 6040.15B has been approved and necessary software changes have been made to process these records. Report only interruptions of one minute or more.

1. NADIN Reporting. The NADIN facility is either the complete switching center location at Atlanta, Georgia (ATL) or Salt Lake City, Utah (SLC) or the concentrator located at Air Route Traffic Control Centers (ARTCC) which transfers data between the switching center and various terminals in or external to the ARTCC. A NADIN interruption is defined as loss of capability to process and transfer data. Software interruptions are not to be reported against the NADIN facility. NADIN facility reporting is assigned to the appropriate switching center or concentrator location.

2. NADIN Message Processing Service (NAMS) Reporting. NAMS service covers all of the message data processing capability within the NADIN. A NAMS interruption is defined as a loss of operationally acceptable message data processing capability at either the switching center or concentrator. NAMS reporting is assigned to the appropriate switching center or concentrator location. All NADIN software interruptions shall be reported against appropriate NAMS.

3. NADIN Data Interchange Service (NDAT) Reporting. NDAT service is the data interchange capability between the two NADIN Switching Centers, or between a switching center and a NADIN Concentrator. A NDAT service interruption is defined as a loss of this data interchange capability. A NDAT interruption will be reported as the result of a failure or out of tolerance condition of any data lines connecting the facilities which causes a degradation of the

NOTE: THE CONTENTS OF THIS ACTION NOTICE, IF APPROPRIATE, SHALL BE INCORPORATED INTO THE DIRECTIVES SYSTEM WITHIN 12 MONTHS AFTER THE DATE OF APPROVAL.

Distribution: A-X(AF/AT)-2; A-FAF-2/3/7 (LTD)
A-FAT-1/5 (LTD)

Initiated By: ASM-110

system beyond acceptable use. NDAT service reporting is assigned to the concentrator facilities and to the geographically most eastern switching center facility (Atlanta).

a. In order to facilitate line interruption reporting, each switching center to switching center data line shall be considered a separate NDAT service. Each of these NDAT services will use the alphabetic identifier and appropriate suffix of the geographically most eastern switching center facility (Atlanta).

b. The NDAT location identifier used with the switching center to concentrator service is the basic alphabetic identifier of the concentrator (ARTCC) site.

4. Dial Backup Lines. The use of dial backup lines to the secondary switching center can only be used to save the NDAT services to the primary switching center and not a failed NAMS service at the primary switching center.

5. Reportable Equipment. The following list of NADIN equipment is reportable as Reportable Equipment (RE):

a. Central Equipment

- (1) Central Processors (CP)
- (2) Memory and Memory Access Control (MAC)
- (3) Alarm and Switchover Unit (ASU)

b. Channel, Storage, and Transfer Subsystems

- (1) Buffer Channel (BC)
- (2) Direct Channel (DC)
- (3) Multiplex Input/Output Channel (MIOC)
- (4) Fixed Head Disk (FHD)
- (5) Moving Head Disk (MHD)
- (6) Magnetic Tape Unit (MTU)

c. Telecommunications Subsystems

- (1) Front End Processor (FEP)
- (2) Processor Connecting Circuit (PCC)

d. Control and Display Subsystems

- (1) Paper Tape Reader/Punch (PTR/PTP)
- (2) Keyboard Video Display Unit (KVDU)
- (3) Time-Code Generator
- (4) Satellite Synchronized Clock
- (5) Indicator Control (ICL)
- (6) Pushbutton Adapter (PAD)

e. Concentrator Subsystem

- (1) Multi-Microprocessor Arrangement for Communications (MARC)
- (2) NADIN Interface Adapter (NIA)
- (3) Single Line Interface (SLI)
- (4) Video Display Unit (VDU)

6. Examples. The following examples illustrate how NADIN facilities and services interruptions should be reported. (See attached NADIN diagram.)

A complete commercial power failure at ZME ARTCC Concentrator and the engine generator failed to assume the load.

<u>IDENT</u>	<u>FACILITY/ SERVICE</u>	<u>REPORT REQUIRED</u>	<u>CODE CATEGORY</u>	<u>SERVICE FAULT LOCATION</u>
ZME	NADIN	YES	83	N/A
ZME	NAMS	YES	83	CONTROL

A complete commercial power failure at ATL switching center and the engine generator failed to assume the load.

<u>IDENT</u>	<u>FACILITY/ SERVICE</u>	<u>REPORT REQUIRED</u>	<u>CODE CATEGORY</u>	<u>SERVICE FAULT LOCATION</u>
ATL	NADIN	YES	83	N/A
ATL	NAMS	YES	83	CONTROL
ZME	NAMS	POSSIBLE REDUCED SERVICE (RS)		
ZTL	NAMS	POSSIBLE REDUCED SERVICE (RS)		
Zxx	NAMS	POSSIBLE REDUCED SERVICE (RS)		

Note: Full ZME, ZTL and Zxx NAMS can be restored through the use of dial backup lines to SLC switching center.

Telco lines between SLC switching center and ZLA ARTCC concentrator failed.

<u>IDENT</u>	<u>FACILITY/ SERVICE</u>	<u>REPORT REQUIRED</u>	<u>CODE CATEGORY</u>	<u>SERVICE FAULT LOCATION</u>
ZLA	NDAT	YES	81	TELCO
ZLA	NAMS	POSSIBLE REDUCED SERVICE (RS)		

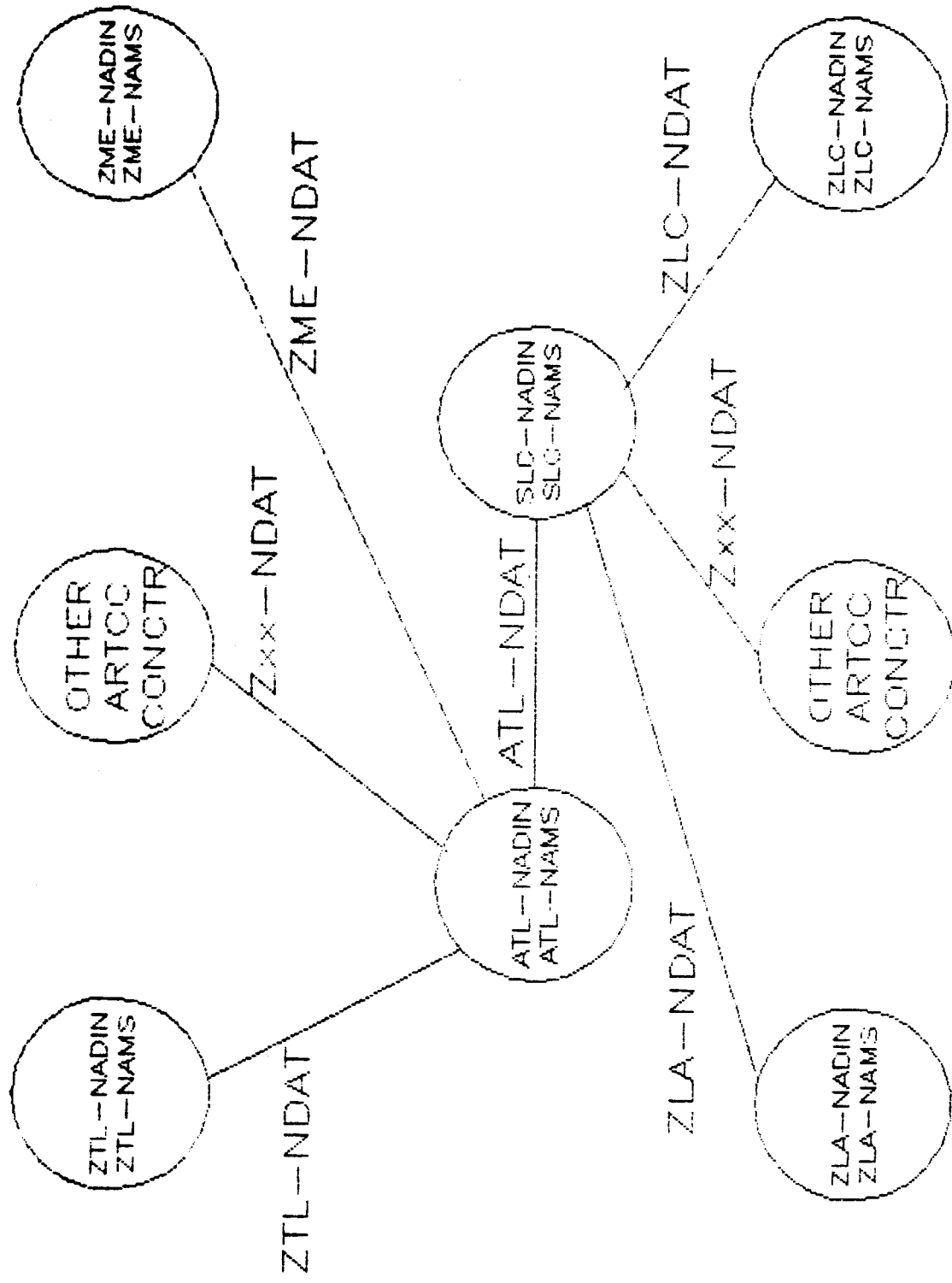
Note: ZLA NDAT can be saved and full ZLA NAMS restored when dial backup lines to SLC/ATL switching center are activated and acceptable data transfer is provided.

In recognition of the complexity of the NADIN system and NAPRS procedures, guidance herein may be imperfect. Therefore, refer all recommendations for improvement or questions on this subject to ASM-110, FTS 267-8581, within the next 30 days, so that such improvements can be reflected in the forthcoming change to Order 6040.15A.



Robert Wedan

Attachment



NATIONAL DATA INTERCHANGE NETWORK (NADIN)